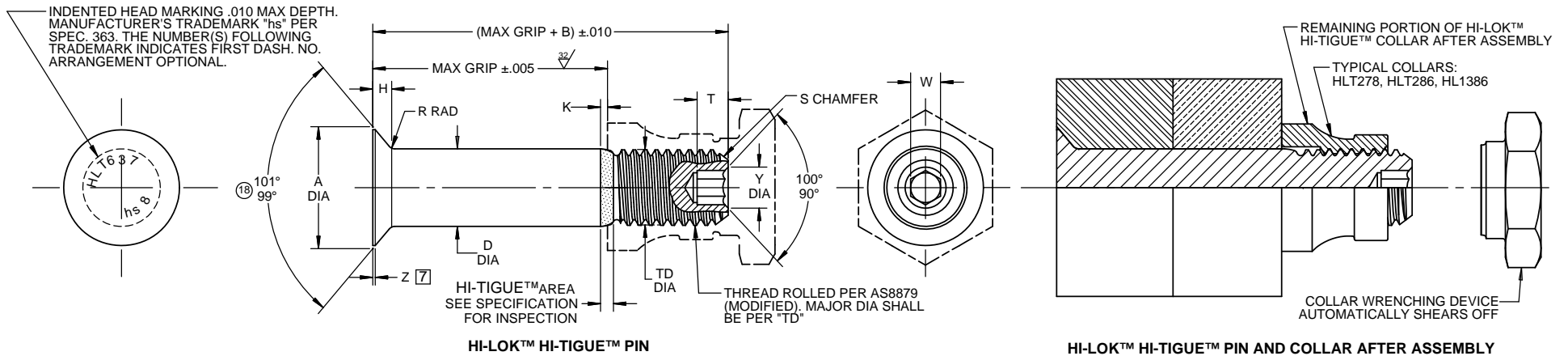


(18)

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SEE COLLAR STANDARDS  
FOR COLLAR STRENGTHS.  
LOWER STRENGTH (PIN OR  
COLLAR) DETERMINES  
SYSTEM STRENGTH

|                      |                   |                  |          | 8   |   | 1                                      |      | 7              |          |              |          |                     |                     |                |              |              |                                      |                              |  |  |  |  |
|----------------------|-------------------|------------------|----------|---|---|--|------|----------------|----------|--------------|----------|---------------------|---------------------|----------------|--------------|--------------|--------------------------------------|------------------------------|--|--|--|--|
| FIRST<br>DASH<br>NO. | PIN<br>NOM<br>DIA | A<br>DIA         | B<br>REF | D DIA                                       |   | TD<br>DIA                              | F    | H              | K<br>REF | R<br>RAD     | Z<br>MAX | S<br>CHAMFER<br>REF | THREAD<br>MODIFIED  | SOCKET         |              |              | DOUBLE<br>SHEAR<br>POUNDS<br>MINIMUM | TENSION<br>POUNDS<br>MINIMUM |  |  |  |  |
|                      |                   |                  |          | WITHOUT<br>COATING<br>OR SOLID<br>FILM LUBE | AFTER<br>COATING<br>OR SOLID<br>FILM LUBE |  |      |                |          |              |          |                     |                     | W<br>HEX       | T<br>DEPTH   | Y<br>DIA     |                                      |                              |  |  |  |  |
| 5                    |                   |                  |          |   |   | NOTE: USE HLT337-6-( ) or HLT453-6-( ) |      |                |          |              |          |                     |                     |                |              |              |                                      |                              |  |  |  |  |
| 6                    | 7/32              | .3813<br>.3765   | .360     | .2182<br>.2177                              | .2182<br>.2172                            | .1840<br>.1810                         | .005 | .0684<br>.0664 | .022     | .030<br>.020 | .015     | 1/32 x 37°          | .1900-32<br>UNJF-3A | .0806<br>.0791 | .100<br>.080 | .119<br>.104 | 7,100                                | 2,750                        |  |  |  |  |
| 8                    | 9/32              | .5066<br>.5018   | .435     | .2807<br>.2802                              | .2807<br>.2797                            | .2440<br>.2410                         | .006 | .0948<br>.0928 | .027     | .030<br>.020 | .015     | 1/32 x 37°          | .2500-28<br>UNJF-3A | .0967<br>.0947 | .110<br>.090 | .142<br>.122 | 11,800                               | 5,820                        |  |  |  |  |
| 10                   | 11/32             | .6335<br>.6287   | .545     | .3432<br>.3427                              | .3432<br>.3422                            | .3060<br>.3020                         | .007 | .1218<br>.1198 | .032     | .040<br>.030 | .015     | 3/64 x 37°          | .3125-24<br>UNJF-3A | .1295<br>.1270 | .130<br>.110 | .180<br>.160 | 17,600                               | 9,200                        |  |  |  |  |
| 12                   | 13/32             | .7604<br>.7556   | .590     | .4057<br>.4052                              | .4057<br>.4047                            | .3680<br>.3640                         | .008 | .1488<br>.1468 | .036     | .040<br>.030 | .015     | 3/64 x 37°          | .3750-24<br>UNJF-3A | .1617<br>.1582 | .160<br>.140 | .217<br>.197 | 24,600                               | 14,000                       |  |  |  |  |
| 14                   | 15/32             | .8884<br>.8812   | .690     | .4682<br>.4677                              | .4682<br>.4672                            | .4310<br>.4260                         | .009 | .1763<br>.1733 | .035     | .050<br>.040 | .022     | 3/64 x 37°          | .4375-20<br>UNJF-3A | .1930<br>.1895 | .190<br>.170 | .253<br>.233 | 32,700                               | 18,900                       |  |  |  |  |
| 16                   | 17/32             | 1.0139<br>1.0068 | .740     | .5307<br>.5302                              | .5307<br>.5297                            | .4930<br>.4880                         | .010 | .2027<br>.1997 | .045     | .050<br>.040 | .022     | 3/64 x 37°          | .5000-20<br>UNJF-3A | .2242<br>.2207 | .220<br>.200 | .289<br>.269 | 42,000                               | 25,500                       |  |  |  |  |
| 18                   | 19/32             | 1.1408<br>1.1337 | .825     | .5927<br>.5922                              | .5927<br>.5917                            | .5550<br>.5500                         | .010 | .2300<br>.2270 | .041     | .050<br>.040 | .025     | 1/16 x 37°          | .5625-18<br>UNJF-3A | .2555<br>.2520 | .260<br>.240 | .326<br>.306 | 52,400                               | 32,400                       |  |  |  |  |
| 20                   | 21/32             | 1.2723<br>1.2651 | .890     | .6552<br>.6547                              | .6552<br>.6542                            | .6180<br>.6120                         | .010 | .2589<br>.2559 | .045     | .050<br>.040 | .025     | 1/16 x 37°          | .6250-18<br>UNJF-3A | .2555<br>.2520 | .260<br>.240 | .326<br>.306 | 64,100                               | 41,000                       |  |  |  |  |
| 24                   | 25/32             | 1.5308<br>1.5236 | 1.115    | .7802<br>.7797                              | .7802<br>.7792                            | .7430<br>.7370                         | .012 | .3149<br>.3119 | .045     | .050<br>.040 | .025     | 1/16 x 37°          | .7500-16<br>UNJF-3A | .3185<br>.3150 | .330<br>.300 | .398<br>.378 | 90,900                               | 59,500                       |  |  |  |  |

"HI-LOK", "HI-TIGUE", AND "HI-KOTE",  
ARE TRADEMARKS OF HI-SHEAR CORPORATION

|                    |                               |  |  |
|--------------------|-------------------------------|--|--|
| DRAWN BY<br>VAN    | DATE<br>1969-03-21            | TITLE<br><b>HI-LOK™ HI-TIGUE™ PIN</b><br>100° FLUSH MS24694 TENSION HEAD<br>TITANIUM<br>1/16 GRIP VARIATION, 1/32 OVERSIZE |  |
| APPROVED<br>MILLER | DATE<br>1969-03-24            | DRAWING NUMBER<br><b>HLT637</b>  |  |
| REVISION<br>(18)   | DATE<br>M.BEARD<br>2017-05-16 | 1 OF 2   |  |

- GENERAL NOTES:**
- 1 Head edge out of roundness shall not exceed "F".
  - 2 Concentricity: Conical surface of head to "D" diameter within .005 FIR.
  - 3 "H" is dimensioned from maximum "D" diameter.
  - 4 Surface texture per ASME B46.1.
  - 5 Dimensions are in inches and to be met after finish.
  - 6 Hole preparation per NAS618.
  - 7 Curved or flat edge manufacturer's option.
  - 8 Maximum "D" diameter may be increased by .0002 to allow for aluminum coating application.
  - 9 Oversize pin for HLT453 and HLT437.
  - 10 After February, 21st of 2015, HI-KOTE™ 1 aluminum pigmented coating per Hi-Shear Spec. 294 will be replaced by REACH compliant HI-KOTE™ 1 NC aluminum pigmented coating per Hi-Shear Spec. 294 on fasteners coated in European Union.

**MATERIAL:** 6Al-4V titanium alloy per AMS4928 or AMS4967.

**HEAT TREAT:** 160,000 psi tensile minimum (95,000 psi shear minimum).

- FINISH:**
- HLT637-( )-( ) = Cetyl alcohol lube per Hi-Shear Spec. 305.
  - 10 HLT637AP( )-( ) = HI-KOTE™ 1 aluminum pigmented coating per Hi-Shear Spec. 294 and cetyl alcohol lube per Hi-Shear Spec. 305.
  - 10 HLT637AZ( )-( ) = HI-KOTE™ 1 aluminum pigmented coating per Hi-Shear Spec. 294, color black on thread end and cetyl alcohol lube per Hi-Shear Spec. 305.
  - HLT637BJ( )-( ) = I.V.D. aluminum coating per MIL-DTL-83488, Type II, Class 3, and cetyl alcohol lube per Hi-Shear Spec. 305.
  - HLT637FB( )-( ) = Grit blast top of head and cetyl alcohol lube per Hi-Shear Spec. 305.
  - HLT637FW( )-( ) = Grit blast top of head, HI-KOTE™ 2 solid film lube on threads only per Hi-Spec. 292, with color black on thread end, and cetyl alcohol lube per Hi-Shear Spec. 305.
  - 10 HLT637KM( )-( ) = HI-KOTE™ 1 aluminum pigmented coating per Hi-Shear Spec. 294, color white on thread end and cetyl alcohol lube per Hi-Shear Spec. 305.
  - HLT637TA( )-( ) = Ti-Shield IIIA or Tiodize Type II, HI-KOTE™ 2 solid film lube per Hi-Shear Spec. 292 and cetyl alcohol lube per Hi-Shear Spec. 305.
  - HLT637TB( )-( ) = HI-KOTE™ 2 solid film lube per Hi-Shear Spec. 292, and cetyl alcohol lube per Hi-Shear Spec. 305.
  - HLT637ST( )-( ) = Grit blast top of head, color white on thread end, and cetyl alcohol lube per Hi-Shear Spec. 305.
  - HLT637NKA( )-( ) = HI-KOTE™ 1 NC aluminum pigmented coating per Hi-Shear Spec. 294 and cetyl alcohol lube per Hi-Shear Spec. 305.
  - 19 HLT637HK( )-( ) = HI-KOTE™ 4 NC aluminum coating per Hi-Shear Spec. 397.

**SPECIFICATION:** HI-LOK™ HI-TIGUE™ Product Specification 342.

**CODE:** First dash number indicates nominal diameter in 1/32nds of the pin which HLT637 oversize pin replaces.  
 Second dash number indicates maximum grip in 1/16ths. See Finish note for explanation of code letters.

**HOW TO ORDER**

19 **EXAMPLE:**

Pin Part Number

HLT637TB8-8

8/16 or 1/2 Maximum Grip Length  
 8/32 or 1/4 Nominal Diameter Pin  
 Finish Code  
 Pin Basic Part Number

HLT637

DRAWING NUMBER

**HLT637**

2 OF 2